REMARKS

I. Claims in the Case

Claims 1-16, 18-62, 66, 70, 74-77 are pending, of which claims 75-77 are new and claims 1-8, 11-14, 18-35, 44-45 and 50-61 are withdrawn and claims 9, 15 and 16 amended. Thus, claims 9, 10, 15, 16, 36-43, 46-49, 62, 66, 70 and 74-77 are currently under examination.

II. Amendments

Independent claims 9, 15 and 16 have been amended to remove the % identity language and obviate that aspect of the enablement rejections. These claims have also been amended to address the new matter rejection, by introducing language believed to be consistent with paragraph [0073] of the specification. Applicants reserve the right to pursue such claims in future continuing applications. Claims 9 and 16 have also been amended to remove the three sub-fragments specified in terms of specific sequence ranges. Note that this amendment in no way alters the scope of the claims in that these same sequences are covered by the remaining subfragments.

New claims 75-77 correspond to claims 9, 15 and 16, with the removal of the "at least 50 amino acids shorter" language found objectionable by the Examiner. It is believed that new claims 75-77 are consistent with the language proposed by the Examiner as acceptable on pages 2-4 of the subject Office Action.

III. Enablement Rejections

The Action first rejects all of the claims on what appears to be two separate enablement bases.

The first basis of enablement rejection appears to be the Examiner's concern that Applicants have not demonstrated that polypeptides having the claimed "% identity" to the Apo-A-1 polypeptides have biological activity. While Applicants traverse this rejection, the complained of language has been removed from the claims. Applicants reserve the right to pursue such claims in later continuing applications, or to reintroduce in the present prosecution should the Examiner raise yet further concerns.

There appears to be a second concern raised by the Examiner, this one with respect to the "at least 50 amino acids shorter" and "at least 75 amino acids shorter" than full length Apo-A-1. This rejection is not completely understood. The claims are now clearly directed to polypeptide "fragments" of Apo-A-1, that include within their sequence one of the specified sub-fragments listed in each of the claims. The Action concedes that full length Apo-A-1 has the claimed biologic activity, and appears to concede that each of the specified sub-fragments have the specified biologic activity, so the rejection is not understood.

At one point, the Examiner attempts to support the argument by stating that "the term 'at least' has no upper limit as to how short the apo-A-1 fragment could be and still maintain its structure and function." This is an incorrect statement of the facts: the claims specify that the fragment must include one of the specified sub-fragments, the shortest of which is 41 amino acids long (*e.g.*, element (d) of amended claim 9) and the longest of which is 170 amino acids (*e.g.*, element (a) of amended claim 9). So, the claims ***do*** specify the "upper limit" of the term "at least" in that the shortest polypeptide within the literal scope of the claim is 41 amino acids long, and this peptide has biologic activity!

At another point, the Examiner states that "[i]t is unpredictable which undisclosed apo-A-1 fragment" has activity. This argument is illogical: we know that full-length has activity, and

we know that each of the sub-fragments specified in the claims have activity (*i.e.*, inhibit TNF or IL-2 production, as shown by the disclosed assays), thus, we know that sub-fragments of intermediate length that ***incorporate*** one of the specified sub-fragments (as required by the claim) will have activity.

Lastly, the Examiner appears to require that in order to satisfy the enablement requirement, the claims must demonstrate effectiveness for "treating any disease." The Examiner is reminded that none of the current claims under examination is directed to therapeutic methods, and thus such concerns are misplaced. So long as the claimed polypeptides have "some" utility (such as in a diagnostic assay or in preparing antibodies), and their preparation are otherwise enabled (which has not been questioned), then a showing of therapeutic efficacy is not required.

Applicants therefore request that the enablement rejections be withdrawn.

V. Anticipation

The Action next reiterates the anticipation rejection of claims 9, 15, 36 and 66-67 with respect to the '038 patent. Applicants again traverse for the same reasons set forth in the previous response. The rejected claims each require that the polypeptide fragment be at least 50 amino acids shorter that full-length Apo-A-1. The shortest fragments disclosed by the '038 patent are all admittedly longer than that specified by the claims. No anticipation is possible.

It is noted that the Examiner's reference to the "comprising" language of the claim is misplaced, since the claims positively specify that the encoded polypeptide must be at least 50 amino acids shorter that full-length.

VI. Obviousness

Next, the Action enters various obviousness rejections with respect to claims 15, 36-43 and 46-49, for reasons of record.

Of these, the only independent claim is claim 15, which is directed to a truncated Apo-A-1 fragment that has an amino terminal or carboxy terminal truncation of at least 50 amino acids – thus the claims cover only truncated fragments of apo-A-1 that are at least 50 amino acids shorter. The Examiner concedes that none of the references teaches an apo-A-1 fragment that meets this limitation, and the Examiner has failed to identify any motivation or suggestion to prepare fragments shorter than those described in the prior art. The Examiner's only argument with respect to claim 15 is the legally incorrect argument that the "comprising" language somehow permits a broadening of the claims beyond the express limitation that they are directed to Apo-A-1 fragments at least 50 amino acids shorter than full length. This argument, as noted above, is without merit.

The remaining claims under rejection depend from claim 15, adding further limitations, and thus are patentable for the same reason that claim 15 is patentable.

VII. New Matter Rejection

The Action next alleges that the claim limitation of "at least 50 amino acids shorter than" full length Apo-A-1 is not adequately supported by the specification. Applicants traverse.

Applicants again direct the Examiner's attention to the specification at paragraph [0073] of the published application, which states:

> [0073] ***The term "AFTI polypeptide fragment" refers to a polypeptide that has a truncation at the amino terminus (with or without a leader sequence) and/or a truncation at the carboxy terminus*** of an AFTI polypeptide described herein,

> AFTI polypeptide allelic variants, AFTI polypeptide orthologs, AFTI polypeptide splice variants and/or an AFTI polypeptide variant having one or more amino acid additions or substitutions or internal deletions (wherein the resulting polypeptide is at least 6 amino acids in length) as compared to an AFTI polypeptide amino acid sequence specifically described herein. An AFTI polypeptide fragment may result, for example, from alternative RNA splicing or from in vivo protease activity. ***In preferred embodiments, truncations comprise*** about 10 amino acids, or about 20 amino acids, or ***about 50 amino acids, or about 75 amino acids***, or about 100 amino acids, or more than about 100 amino acids. The polypeptide fragments so produced will comprise about 25 contiguous amino acids, or about 50 amino acids, or about 75 amino acids, or about 100 amino acids, or about 150 amino acids, or about 200 amino acids. ***In certain embodiments, an AFTI polypeptide fragment of the invention is from 6 amino acids in length up to a polypeptide described herein, or any number of amino acids between those sizes.*** Such AFTI polypeptide fragments may optionally comprise an amino terminal methionine residue. It will be appreciated that such fragments can be used, for example, to generate antibodies to AFTI polypeptides.

Specification, paragraph [0073] (emphasis ours).

Thus, the specification very clearly contemplates truncations of "about 50 amino acids" or "about 75 amino acids" from either the carboxy or amino terminus, as well as "from 6 amino acids in length up to" one of the foregoing, as well as "any number of amino acids between those sizes." Hence, this passage clearly contemplates truncations of "***at least*** 50 amino acids" and "***at least*** 75 amino acids."

Applicants have attempted to clarify the intended scope and address the Examiner's new matter concerns, and thus progress the case. The claims, as exemplified by claim 9, now recite "polypeptide fragment of apo-A-I, wherein the encoded polypeptide fragment of apo-A-1 is further defined as a fragment of SEQ ID NO:2 that is truncated at its amino or carboxy terminus, said truncation being at least 50 amino acids relative to SEQ ID NO:2." This language now carefully tracks the language found in paragraph [0073] recited above, and thus should now be acceptable.

The Examiner now raises a further new matter rejection with respect to the nucleotide ranges found in, for example, elements (a), (c) and (e) or claim 9 prior to the current amendments. Applicants representative reviewed the file history (prosecuted by the predecessor to the current representative) and noted that this issue was addressed in the Amendment filed on September 24, 2004, in which the predecessor attorney explained in detail why the nucleotide sequences in the claims as filed were incorrect and how one of skill would readily discern this from the specification (see comments at pages 24-25 of that Amendment). Interestingly, it appears as though these amendments were discussed with the current Examiner during an interview. It appears from the Applicants comments that these amendments were approved by the Examiner, and that the Examiner actually found that the claims so amended were fully enabled and described by the specification. Indeed, no concerns were raised by the current Examiner regarding these amendments in subsequent office actions, until now. Nonetheless, Applicants have proceeded to simply delete elements (a), (c) and (e) from claims 9 and 16 in that such amendment, as discussed in the amendment section above, appears to in no way alter the scope of the claims

VIII. Indefiniteness

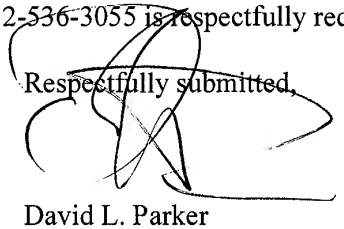
It is believed that the current claim amendments obviate the Examiner's concerns regarding indefiniteness.

IX. Conclusion

Applicants believe that the foregoing remarks fully respond to all outstanding matters for this application. Applicants respectfully request that the rejections of all claims be withdrawn so they may pass to issuance.

Should the Examiner desire to sustain any of the rejections discussed in relation to this Response, the courtesy of a telephonic conference between the Examiner, the Examiner's supervisor, and the undersigned attorney at 512-536-3055 is respectfully requested.

Respectfully submitted,



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